

10:12 O'Clock AM

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA

IN AND FOR THE COUNTY OF YAVAPAI

AUG 1 2010

JEANNE HICKS, Clerk

~~CY~~ Deputy

THE STATE OF ARIZONA,)

Plaintiff,)

VS.)

No. CR 2008-1339

STEVEN CARROLL DEMOCKER,)

Defendant.)

BEFORE: THE HONORABLE THOMAS B. LINDBERG
JUDGE OF THE SUPERIOR COURT
DIVISION SIX
YAVAPAI COUNTY, ARIZONA

PRESCOTT, ARIZONA
THURSDAY, MAY 27, 2010
9:08 A.M.

REPORTER'S PARTIAL TRANSCRIPT OF PROCEEDINGS

DAUBERT HEARING

TESTIMONY OF ERIC GILKERSON

ROXANNE E. TARN, CR
Certified Court Reporter
Certificate No. 50808

INDEX**PROCEEDINGS****PAGE****TESTIMONY****PAGE****ERIC GILKERSON**

Direct examination by Mr. Butner	4
Voir dire examination by Mr. Sears	17
Direct examination resumed by Mr. Butner	18
Voir dire examination by Mr. Sears	20
Direct examination resumed by Mr. Butner	24
Cross-examination by Mr. Sears	33
Redirect examination by Mr. Butner	57

MAY 27, 2010
9:08 A.M.

DAUBERT HEARING

APPEARANCES:

FOR THE STATE: MR. JOE BUTNER AND MR. JEFF
PAUPORE.

FOR THE DEFENDANT: MR. JOHN SEARS, MR. LARRY
HAMMOND AND MS. ANNE CHAPMAN.

THE COURT: This is continuing in the State
versus Steven DeMocker, CR 2008-1339. Mr. DeMocker is
present in custody. His attorneys are all present, and the
prosecuting attorneys are all present.

I think we had testimony commencing on
the motion with regard to experts.

Are you ready to proceed, Mr. Butner?

MR. BUTNER: State is ready, Your Honor.

THE COURT: Mr. Sears?

MR. SEARS: Yes, Your Honor.

THE COURT: Why don't we go ahead with those
things first.

MR. BUTNER: I have two witnesses coming down.
I think they may be out in the hall.

THE COURT: You may check, of course.

MR. BUTNER: State would call Eric Gilkerson
to the stand.

MR. SEARS: We thought Mr. Hoang was going to

1 testify first. I need to get my materials out for
2 Mr. Gilkerson.

3 THE CLERK: You do solemnly swear or affirm
4 under the penalty of perjury that the testimony you are about
5 to give will be the truth, the whole truth, and nothing but
6 the truth, so help you God?

7 THE WITNESS: I do.

8 THE COURT: You may proceed.

9 MR. BUTNER: Thank you, judge.

10 ERIC GILKERSON,
11 called as a witness, having been duly sworn, testified as
12 follows:

13 DIRECT EXAMINATION

14 BY MR. BUTNER:

15 Q. Please state your name for the record the, sir.

16 A. Eric, spelled E-R-I-C. Last name is Gilkerson,
17 spelled G-I-L-K-E-R-S-O-N.

18 Q. What is your occupation, sir?

19 A. I am a forensic examiner.

20 Q. How long have you been a forensic examiner?

21 A. For 11 years.

22 Q. Where do you perform your job as a forensic
23 examiner?

24 A. At the FBI laboratory in Quantico, Virginia.

25 Q. How long have you been there?

1 A. I have been employed with the FBI for 13 years.

2 Q. Do you have any special education to prepare
3 yourself for your occupation as a forensic examiner?

4 A. I have a Bachelor of Science degree in
5 biochemistry from the University of Maryland.

6 Q. When did you receive that degree?

7 A. 1992.

8 Q. Any post graduate type of work?

9 A. No.

10 Q. So that was in biochemistry?

11 A. Biochemistry is what my degree is in, yes.

12 Q. Once you graduated from the University of Maryland
13 with a degree in biochemistry, where did you go?

14 A. I worked in a few different companies as a
15 chemist.

16 Q. How long did you work as a chemist?

17 A. For a few years.

18 Q. When did you go with the FBI?

19 A. In 1997.

20 Q. Did you receive any specialized training in the
21 field of expertise in which you work at the FBI?

22 A. Yes, I did.

23 Q. Would you describe that for us, please.

24 A. Yes. I worked cases under more experienced and
25 certified examiners. I took manufacturing tours. I attended

1 professional meetings. I read some literature. I conducted
2 casting, lifting, chemical enhancement, photography type
3 exercises.

4 Q. Was there a specialized course of study there at
5 the FBI for your field of expertise?

6 A. It was a one- to two-year training program.

7 Q. Were you under any person's specific tutelage or
8 mentoring?

9 A. There were two or three other examiners at that
10 time when I first started.

11 Q. Do you have an approximation as to the number of
12 hours of education that you have had in your field of
13 expertise?

14 A. I have been an examiner for 11 years. I don't
15 know how many hours that is. The training was about a year
16 to year-and-a-half.

17 Q. Do you up-date your training on a regular basis?

18 A. Yes.

19 Q. Would you describe for us what you do in that
20 regard?

21 A. I go to professional meetings to see what new
22 information is available. I also conduct some exercises
23 where I make casts or lifts or things like that.

24 Q. Is there such a thing as continuing education in
25 your field?

1 A. Well, we continually go to professional meetings
2 to see if there is any new innovations or technology or
3 things like that.

4 Q. Are these sort of a seminar-type meetings where
5 developments in your field of expertise are discussed and
6 additional training is imparted to the members or the
7 participants?

8 A. Yes, through lectures and workshops, primarily.

9 Q. Have you testified as an expert in any courts or
10 other venues?

11 A. Yes, I have.

12 Q. Would you describe for us where that has taken
13 place.

14 A. I have testified in both State and Federal courts.

15 Q. On approximately how many occasions have you
16 testified as an expert witness?

17 A. Approximately 24 to 30 times.

18 Q. Okay. And would you describe for us some of the
19 courts in which you have testified?

20 A. Yes. I have testified in California, Alabama.
21 I've testified in New York, Florida, North Carolina. Those
22 are some examples.

23 Q. Have you ever testified in Arizona before?

24 A. No, I have not.

25 Q. Do you currently have another case that you are

1 going to be an expert witness here in Arizona?

2 A. Yes.

3 Q. Is that in federal court?

4 A. Yes, it is.

5 Q. Have you been qualified in federal court to
6 testify as an expert witness through a *Daubert* type of
7 hearing?

8 A. Yes, I have.

9 Q. When did that occur?

10 A. Around 2005.

11 Q. Do you recall the name of that case?

12 A. I believe it was United States versus Calvin Ford.

13 Q. *United States versus Ford*?

14 A. Yes.

15 Q. In what federal court did that case take place?

16 A. It was in Camden, New Jersey. I am not sure if
17 that is in the District of New Jersey or Pennsylvania.

18 Q. What type of examination did you perform in that
19 particular case?

20 A. I did a direct comparison from shoes that were
21 recovered from a suspect to impressions that were recovered
22 from a crime scene.

23 Q. That was a footprint comparison type of case?

24 A. Shoeprint, yes.

25 Q. Would you describe for us the type of theory or

1 technique that is employed in your field of discipline to
2 perform your analysis?

3 A. Yes. I employ what I would refer to as a
4 side-by-side comparison. I look at geometric shapes that
5 make up a shoe impression that is recovered from a crime
6 scene, and I compare them to geometric shapes that make up a
7 sole pattern that's on the bottom of a shoe. The shoe can be
8 from a suspect or from a data base that has known out sole
9 samples in it, usually from manufacturers.

10 Q. Is this the type of analysis that you have been
11 doing for these 11 years that you have been in your field?

12 A. Yes. I basically have done two types of analyses.
13 One in which usually there is no suspect, or they have a
14 suspect and they haven't recovered the shoes, and they want
15 to know what type of shoe could have made a crime scene
16 impression, and that is what I generally refer to as a data
17 base search. And there is a second type of comparison, in
18 which there are shoes recovered from a suspect, and I compare
19 those directly to crime scene impressions.

20 Q. You indicated that you use these geometric shapes
21 in this process of side-by-side comparison; is that correct?

22 A. Yes. They make up the pattern.

23 Q. Would you describe what you mean by these
24 geometric shapes, give us examples.

25 A. Examples could be squares, rectangles, triangles.

1 There are also some that don't have a specific geometric
2 description. They might be amorphous in shape, may have many
3 sides. 12-sided figure, for example.

4 Q. And would you kind of describe for us how you
5 actually do this process?

6 A. Yeah. A shoeprint analysis is a four-step
7 process. We initially start with the sole pattern or the
8 design. Then we continue on and we compare the physical size
9 and spacing of those geometric shapes that comprise the out
10 sole pattern. We then look at any wear patterns that result
11 of somebody wearing the shoe. And then we look at what are
12 called individual characteristics; cuts, nicks, maybe a rock
13 embedded in a shoe that would result as -- would occur as a
14 result of somebody wearing that shoe, and they may be used to
15 effect an identification.

16 Q. These individual characteristics, are these things
17 like sometimes you get a chunk out of the shoe from a cut or
18 something like that?

19 A. Yes.

20 Q. And tell us how you do this analysis, then, in
21 terms of this four-step process?

22 A. Well, initially I compare the out sole pattern,
23 and that is in a case where I have another shoe from a
24 suspect. And when I do a data base search, I am also
25 examining the out sole pattern. And if I have a shoe from a

1 suspect, I can make test impressions and continue on and use
2 those. I superimpose the test impressions over the crime
3 scene impressions to see how well the physical size and
4 spacing corresponds, as well as assess any wear and
5 individual characteristics that might appear in the crime
6 scene print.

7 Q. In this particular case, what did you do?

8 A. In this particular case, I only looked at that
9 first part of that, which is the sole pattern. There were no
10 known shoes to compare when I received the case initially. I
11 was asked to determine what type of shoe or what kind of shoe
12 could have made the impressions from the crime scene.

13 Q. What did you receive in this case in order to do
14 your analysis from, so to speak?

15 A. I received a series of images on a CD.

16 Q. Who provided those to you?

17 A. Our FBI field office.

18 Q. The one in Flagstaff?

19 A. Yes.

20 Q. Do you know where those images came from?

21 A. They came from Yavapai County.

22 Q. From the Yavapai County Sheriff's office?

23 A. Yes.

24 Q. Okay. And these images -- were these photographic
25 images?

1 A. They were images. I don't know if they used a
2 digital camera or conventional camera, but they were images
3 that were somehow burned to a CD, and the CD was sent to me.

4 Q. Did you have to do any enhancing of these images
5 on the CD in order to do your analysis?

6 A. Initially, no. I made observations of the
7 geometric shapes that I saw.

8 Q. So they were sufficient for your purposes at that
9 point in time?

10 A. Yes. Those that I could analyze, yes.

11 Q. You say those that you could analyze. Were there
12 some that you could not use?

13 A. Yes. There were some that I could not analyze.
14 They did not have sufficient detail to do a data base search.

15 Q. How many were of sufficient detail for you to do a
16 data base search, if you can recall?

17 A. I don't recall the exact number. There were a
18 few, I believe. I don't remember the exact number.

19 Q. You have your notes with you today?

20 A. Yes.

21 Q. If necessary to refresh your recollection, you can
22 refer to those.

23 A. Yes.

24 Q. So you got these images from the FBI field office
25 in Flagstaff, which came from the Yavapai County Sheriff's

1 office, and what did you do with the images then?

2 A. I made observations from the images. I observed
3 what geometric shapes that I saw and the impressions from the
4 crime scene, and I entered those in as search parameters into
5 our data base to see if there was a shoe in there that could
6 have made those impressions.

7 Q. Would you describe the data base that you use for
8 us, please.

9 A. We have two data bases. We have an older data
10 base. It is maintained internally by the FBI that we have
11 discontinued using since about 2007 or 2008. And since that
12 time, we use a system sold by Foster and Freeman and that
13 system is called SICAR.

14 Q. How do you spell that?

15 A. The acronym is S-I-C-A-R.

16 Q. And this Foster and Freeman SICAR, approximately
17 how many images are in that data base?

18 A. Approximately 20- to 25,000.

19 Q. And in the FBI data base, how many images are in
20 that?

21 A. Approximately 15- to 20,000.

22 Q. How did the FBI get their images, so to speak, in
23 their data base?

24 A. They were collected from the Internet. Some were
25 provided by manufacturers, and others were obtained in case

1 work.

2 Q. So various sources?

3 A. Yes.

4 Q. But these are 15- to 20,000, in essence, sole
5 prints?

6 A. Out sole patterns or out sole designs.

7 Q. That is what you call it, out sole designs?

8 A. Yes. That is the tread pattern on the bottom of
9 the shoe. I refer to it as an out sole design.

10 Q. In this Foster and Freeman SICAR data base, are
11 you aware of how those images are collected?

12 A. I believe they are collected from manufacturers,
13 as well. I don't know entirely where they get all their
14 images from.

15 Q. If we could back up for just a second. This
16 theory or technique that you employ in analyzing these out
17 sole designs, is this a technique or theory that has been
18 subjected to publication, first of all?

19 A. Yes, it has.

20 Q. Would you give us an indication of what kind of
21 publication it has been subjected to?

22 A. It has been in the *Journal of Forensic*
23 *Identification*. It has been in older FBI laboratory
24 bulletins, and also been published in journals from other
25 countries as well.

1 Q. And how long has this publication process been
2 going on?

3 A. We have articles on shoe impression evidence that
4 date back to the 1930's.

5 Q. And then is it also in any way subject to peer
6 review?

7 A. Yes. The articles are peer reviewed by someone,
8 as well as readers can comment on the articles and respond to
9 those articles to the editor of the journal.

10 Q. Are there any professional organizations or
11 entities that oversee your field of scientific discipline?

12 A. Yes. Primarily the International Association for
13 Identification or IAI is the acronym.

14 Q. International Association for Identification?

15 A. Yes.

16 Q. How long, to your knowledge, has that organization
17 been in existence?

18 A. Since the 1910's.

19 Q. Since 1910?

20 A. Around 1915, 1913.

21 Q. Basically, what is the function of International
22 Association for Identification?

23 A. It is to provide an avenue for other examiners to
24 train each other, to offer up results of independent
25 research.

1 MR. BUTNER: Okay. Before we go past this,
2 let me show you what has been marked as Exhibit No. 2226.

3 May I approach, Judge?

4 THE COURT: You may.

5 MR. BUTNER: Thank you.

6 Q. Do you recognize that, sir?

7 A. Yes. That is my CV.

8 Q. Your curriculum vitae?

9 A. That's correct.

10 Q. Basically, what is on your CV?

11 A. It is a list of previous jobs that I have had, and
12 training classes that I have taken, and professional
13 organizations that I belong to or did belong to in the past.

14 MR. BUTNER: I'd move for the admission of
15 2226.

16 MR. SEARS: No objection.

17 THE COURT: 2226 is admitted for this hearing.

18 MR. BUTNER: Thank you.

19 Q. Let me show you --

20 MR. SEARS: Your Honor, could we have a
21 moment. We have been handed an exhibit we have never seen
22 before.

23 MR. BUTNER: While he is looking at that, I
24 can proceed, Judge. I don't want to hold this up any longer.

25 MR. SEARS: I may have an objection if he is

1 going to offer the exhibit.

2 THE COURT: You may.

3 MR. SEARS: May I have a question on voir
4 dire?

5 THE COURT: Pertaining to -- what is the
6 number?

7 MR. SEARS: 2228.

8 THE COURT: You may.

9 MR. SEARS: Thank you.

10 VOIR DIRE EXAMINATION

11 BY MR. SEARS:

12 Q. Mr. Gilkerson, what is this?

13 A. I don't know what you have in front of you. I
14 would have to see it.

15 MR. BUTNER: I am showing the witness for the
16 record what has been marked as Exhibit 2228.

17 THE WITNESS: (Whereupon, the witness reviews
18 a document.)

19 It is a list of journal articles that
20 have been published that relate to shoeprint and tire tread
21 evidence.

22 BY MR. SEARS:

23 Q. Where did you obtain that?

24 A. I didn't provide this.

25 Q. Have you ever seen it before?

1 A. Yes. I recognize some of the articles in there.

2 Q. You have no idea where it came from today?

3 A. It may have come from another expert, but I didn't
4 provide this.

5 Q. Have you read all of the articles listed in
6 Exhibit 2228 for identification?

7 A. No.

8 MR. SEARS: Foundation.

9 THE COURT: Hasn't been offered, Mr. Sears.

10 Proceed, Mr. Butner.

11 MR. BUTNER: Thank you.

12 DIRECT EXAMINATION RESUMED

13 BY MR. BUTNER:

14 Q. Mr. Gilkerson, referring to Exhibit 2228, you
15 testified that that's a list of journal articles; is that
16 correct, sir?

17 A. Yes. It is a list of journal articles that have
18 been published, and it is also a list of articles from
19 symposiums.

20 Q. Are these publications that are within your field
21 of expertise?

22 A. Yes, they are.

23 Q. Do you recognize any of them?

24 A. Yes. I recognize some of the journals.

25 Q. And have you read some of the journals articles

1 that are in that list?

2 A. Yes.

3 Q. There is a specific journal article attached to
4 the back of that list. Would you take a look at that,
5 please.

6 A. (Whereupon, the witness reviews a document.)

7 Yes.

8 Q. Do you recognize that specific article?

9 A. I recognize the author. I don't recognize this
10 specific article, but I recognize the author, yes.

11 Q. Are these all examples of the publications in your
12 field of expertise?

13 A. Yes, they are.

14 Q. And are these the types of publications that you
15 were referring to earlier when you indicated that there were
16 publications in your field and that they were peer reviewed?

17 A. Yes.

18 MR. BUTNER: I am offering them as examples,
19 Your Honor, of the kinds of publications that are in this
20 witness' field of expertise subject to peer review.

21 THE COURT: Mr. Sears?

22 MR. SEARS: Further voir dire, Your Honor?

23 THE COURT: You may.

24 MR. SEARS: Thank you.

25

VOIR DIRE EXAMINATION

1
2 BY MR. SEARS:

3 Q. Which ones of those articles or publications lists
4 in there discuss the science of data base searches in
5 shoeprint or footwear impression comparison?

6 A. I don't know. I would have to look through the
7 entire list.

8 Q. The only work that you did in this case was to
9 conduct a data base search to try to find manufacturer and
10 style information based upon impressions that were you sent,
11 photographs of impressions?

12 A. Yes. I was asked to determine what make and model
13 shoe could have left the impressions.

14 Q. You did not do a side-by-side comparison for the
15 reasons that you previously stated to Mr. Butner; correct?

16 A. I did do a side-by-side comparison. I compared
17 the geometric shapes that make up the impressions to a data
18 base for out sole patterns. It is a side-by-side comparison.

19 Q. Pardon my ignorance. I meant to say that you said
20 that you had no suspect shoe to use to make an out sole
21 impression and do that sort of identification and inclusion
22 work; correct?

23 A. Yes, that's correct. I was not submitted shoes
24 from a suspect to compare to crime scene impressions.

25 Q. As you sit here today, can you tell the Court that

1 any of those articles listed in proposed 2238 {sic} deal with
2 the specific science of side-by-side comparisons using a data
3 base?

4 A. (Whereupon, the witness reviews a document.)

5 I don't see any here specifically. We
6 use a data base for side-by-side comparison, but ultimately,
7 I am the one that would do the actual comparison.

8 Q. That is not my question. My question deals with
9 that proposed exhibit in front of you. I need to know if you
10 know whether any of those articles listed in that list of
11 publications deals specifically with the work that you did in
12 this case.

13 A. I would have to look at the specific article. The
14 answer to that question is I don't know. I would have to see
15 the specific article.

16 Q. Have you ever written a scholarly article on data
17 base shoeprint comparisons?

18 A. No. I don't write articles on this type of
19 evidence. I compare and examine cases in the laboratory.

20 MR. SEARS: Foundation and relevance, Your
21 Honor.

22 THE COURT: Mr. Butner.

23 MR. BUTNER: Judge, the relevance is that
24 under a *Daubert* type of review, one of the questions or the
25 issues in that type of review is whether the theories and

1 techniques have been subjected to peer review and
2 publication. And as I stated, this list of peer reviewed
3 publications is an example of what takes place in this
4 expert's field of expertise.

5 MR. SEARS: Your Honor?

6 THE COURT: Mr. Sears.

7 MR. SEARS: The burden under the statute is on
8 the State by a preponderance to show that this expert's work
9 and opinions are sufficient under the law, and he has
10 narrowed, as we knew he would, the scope of the work he did
11 beyond the general science of shoeprint impression comparison
12 work to the specific task of making comparisons from a data
13 base and proposed Exhibit 2238 deals in no respect with that
14 particular science, so it is of no value to the Court in
15 making the findings under this statute to have a list of
16 articles that do not deal in any way with the work this
17 witness did.

18 Furthermore, this witness cannot say
19 whether any of those articles, in fact, deal with that. In
20 fact, he can't say, other than he remembers reading some of
21 the articles, much of anything here today about the list of
22 publications. It is not relevant or helpful to the Court in
23 deciding the issues under this statute to have this exhibit
24 admitted into evidence. This witness can't support it, and
25 it is irrelevant.

1 THE COURT: Which statute are you referring
2 to? The new one that is not effective yet?

3 MR. SEARS: Yes, Your Honor.

4 MR. BUTNER: Thank you, Your Honor.

5 THE COURT: It seems to me the purpose is
6 illustrative only. I will admit it but only for that purpose
7 of showing some of the scientific background behind the
8 general comparison purposes from a scientific standpoint, but
9 the witness testified he can't lay the foundation for the
10 whole of the exhibit.

11 MR. BUTNER: That is all it was offered for is
12 an example.

13 THE COURT: But what I would like to have is
14 if he would mark the articles on the exhibit in some fashion
15 with his initials at the beginning of the article of what he
16 has read within the authored exhibit.

17 THE WITNESS: I would have to glance at the
18 articles again. I can't specifically recall any of these
19 articles. Most of the articles I would have read were during
20 training in 1998.

21 THE COURT: All right. I will not have you
22 mark anything.

23 Go ahead.

24 MR. BUTNER: Thank you, Your Honor.

25

DIRECT EXAMINATION RESUMED

BY MR. BUTNER:

Q. Okay. You employed a side-by-side impression comparison technique in this particular case; is that correct?

A. Yes. That's correct.

Q. If I understood your earlier testimony, you did that by entering the geometric shapes that you had discovered in examining the out sole design of the footprints depicted in the images that you were provided?

A. Yes, that's correct.

Q. Tell us what you did from there, please.

A. I entered the geometric shapes that I observed as search parameters. Then I queried the system and a group of shoes came back, and I scrolled through that list of shoes to see if any of them could have made the crime scene impressions. And I did find one that could have made the crime scene impressions.

Q. So you put this -- did you put a list of shapes into this system?

A. I put different geometric shapes in that I observed in the impression.

Q. Can you give us examples of the geometric shapes that you put into the system?

A. Yes. I used what is called a perimeter lug. That

1 is a search parameter. I also used a tri-lobe, as it is
2 called. I used that as a search parameter as well.

3 Q. Okay. And how do you enter this into the data
4 base?

5 A. It is an icon driven data base. So there are
6 icons that represent, let's say, a triangle. An icon that
7 represents a rectangle, for example. Those are entered into
8 the search parameter. The data base will query the data base
9 and the data base will come back with a list of out soles
10 that have those particular shapes in the out sole pattern.

11 Q. Is there a special type of technique that you
12 employ in analyzing these things, once you have submitted
13 them into the data base?

14 A. Yes. I compare to see not only are the shapes in
15 agreement, the geometric shapes, but also how they are
16 oriented and aligned.

17 Q. This is a method that is commonly employed in your
18 field of expertise?

19 A. Yes. For example, if I enter in a triangle and it
20 is the toe area in the crime scene impression, I will look to
21 see if there is a triangle in the toe area on the shoe that I
22 am looking at in the data base. That is what I am referring
23 to when I say the orientation.

24 Q. I understand. Once that is done, you indicated
25 that you got some examples back from the data base that

1 corresponded to some extent with the shapes that you entered?

2 A. Yes.

3 Q. And how do you analyze those examples, then, when
4 they come back to you, so to speak?

5 A. I look at the overall pattern to see if it
6 corresponds with the overall pattern in the crime scene
7 impression.

8 Q. Is this what you refer to as the side-by-side
9 comparison?

10 A. Yes.

11 Q. Is there some specific sort of method that you
12 employ when you do this side-by-side comparison?

13 A. I am using pattern recognition skills. I am
14 looking to see if there is a triangle in the crime scene
15 impression if I see a triangle in the known shoe from the
16 data base.

17 Q. When you employ this particular technique, is
18 there a known or potential rate of error?

19 A. There is no inherent or built-in error that I am
20 aware of in doing a side-by-side comparison. It a
21 qualitative analysis. It is not a quantitative analysis
22 where you are generating a number. There could be an error
23 from someone not applying the methodology properly, but I am
24 not aware of any inherent error in a side-by-side comparison
25 methodology.

1 Q. In going through this methodology and this
2 side-by-side comparison, are you tested in terms of your
3 usage of this method on a regular basis?

4 A. Yes, I am.

5 Q. Tell us about that, please.

6 A. We are sent examples from Collaborative Testing
7 Service, and we conduct comparisons like we would in a normal
8 case, and they involve analyzing the sole pattern, like I
9 would do on a data base search.

10 Q. What is Collaborative Testing Service?

11 A. They are a company that provides tests for
12 examiners and anyone, I guess, that wants to take them.

13 Q. And how often do you do this?

14 A. On a yearly basis. Once a year.

15 Q. And how many years have you been tested concerning
16 the employment of this method and analysis and your results?

17 A. Since 1999. 11 years.

18 Q. And what are your test results?

19 A. I have passed all of those tests. I did not make
20 an error in any of those tests.

21 Q. Have you -- so you have never made an error in any
22 of those tests?

23 A. That's correct.

24 Q. And are you certified in some fashion?

25 A. Yes, I am.

1 Q. Would you describe your certifications for us,
2 please.

3 A. I am certified by both the FBI laboratory, as well
4 as the International Association for Identification.

5 Q. And do you need to be re-certified on a regular
6 basis?

7 A. Yes. Every five years for the IAI, and with the
8 FBI laboratory, we would have proficiency tests. We are not
9 re-certified, per se.

10 Q. How often do you have a proficiency test at the
11 FBI laboratory?

12 A. Once a year.

13 Q. That is in addition to the collaborative testing?

14 A. That is the testing that the FBI laboratory uses
15 in my field.

16 Q. And then in regard to the certification through
17 the IAI every five years, what is done for that
18 certification?

19 A. A test is mailed out to the testee, and you work
20 the case like you would a normal case, making observations
21 and drawing conclusions, and then it is evaluated to see if
22 you obtained a correct forensic answer.

23 Q. And who are the evaluators in determining your
24 test results for the IAI?

25 A. They would be fellow footwear examiners.

1 Q. And do you hold any -- are you a member of the
2 IAI, first of all?

3 A. Yes, I am.

4 Q. How long have you been a member?

5 A. Since 1998 or 1999.

6 Q. And do you hold any positions in that
7 organization?

8 A. Yes.

9 Q. What?

10 A. I am the chairperson of the footwear certification
11 board. That is the board that administers the IAI
12 certification.

13 Q. Do you look at your own test results?

14 A. Someone else would send me a test, and I would
15 analyze it like I would a case, send it back to another board
16 member, and they would evaluate whether or not I had obtained
17 the correct forensic answer.

18 Q. So you don't review your own tests?

19 A. No.

20 Q. Somebody reviews your test?

21 A. Yes.

22 Q. And in regard to your tests through the IAI, what
23 are your test results on those five year certification tests?

24 A. I have passed all of those.

25 Q. In -- what is, in essence, the scientific

1 community in your field of expertise? Would you describe
2 what that encompasses.

3 A. Would you repeat that again.

4 Q. What is the scientific community in your field of
5 expertise? Could you describe that for us.

6 A. That would include practitioners in other fields.
7 Other pattern impression fields including latent
8 fingerprints, tire impressions, tool mark examiners,
9 handwriting analysis. They are all what we would generally
10 refer to as pattern impression analysts.

11 Q. And how long has that scientific community been in
12 existence?

13 A. For many years.

14 Q. Do you have any idea how many?

15 A. At least since the 1930's.

16 Q. And is the methodology that you employed in
17 analyzing the footprints in this particular case, is that
18 accepted within your scientific community?

19 A. Yes.

20 Q. How long has that been accepted?

21 A. Since the analysis has been conducted.

22 Q. So going back to the '30's?

23 A. Yes.

24 Q. And then this data base that you employ, how long
25 have the data bases been in existence, so to speak?

1 A. The FBI laboratory had a rubber heel and sole data
2 base as far back as the 1930's.

3 Q. Has this methodology that you employed in
4 examining the footwear impressions in this case, has that
5 methodology been in general usage within that scientific
6 community since that time frame?

7 A. Yes. It has been used in many cases in many
8 different courts in the United States and elsewhere.

9 Q. In this particular case now, going to the facts of
10 this particular case, you described the method that you used,
11 this side-by-side comparison; right?

12 A. Yes.

13 Q. And you indicated some of the geometric patterns
14 that you found. And I think you said a tri-lobed type of
15 pattern was one of those patterns; is that right?

16 A. That's correct.

17 Q. And some other kind of lug pattern?

18 A. A perimeter lug. And an arrow. I recall using an
19 arrow as a search parameter, as well.

20 Q. In going through and conducting an analysis and
21 comparison between the data base shoeprints -- pardon my
22 language -- but the data base shoeprints and the image
23 prints, did you arrive at any conclusions?

24 A. Yes, I did.

25 Q. Would you tell us what your conclusions were,

1 please.

2 A. It was my opinion that the impression from the
3 crime scene most closely corresponded with a La Sportiva
4 Ultranord shoe, and that make and model shoe could have made
5 the impressions that were recovered from the crime scene.

6 Q. Okay. And this La Sportiva Ultranord shoe, did
7 you conduct any additional investigation to see what out sole
8 pattern that shoe had with any other shoes?

9 A. I was sent three -- I was sent three shoes from a
10 detective at Yavapai County, and he had obtained those from
11 the manufacturer. And I compared the sole patterns on each
12 of those to one another and to the crime scene impressions,
13 as well.

14 Q. The manufacturer, you mean being La Sportiva?

15 A. Yes.

16 Q. Do you remember what the model designations were
17 for those three shoes that were sent to you by the detective?
18 This is Detective McDormett; right?

19 A. Yes, that's right.

20 Q. What were the names of those shoes?

21 A. The Ultranord, the Pike's Peak, and the Imogene.

22 Q. How do you spell Imogene?

23 A. I-M-O-G-E-N-E.

24 Q. And did you make a comparison with those out sole
25 patterns to the patterns that you had found in the data base?

1 A. Yes, I did.

2 Q. And what were the results?

3 A. It was my opinion that all three models had the
4 same out sole pattern, and therefore, any one of the three
5 could have made the impressions from the crime scene -- could
6 have made the impressions that were recovered from the crime
7 scene.

8 MR. BUTNER: I don't have any further
9 questions. Maybe I do.

10 I don't have any further questions of
11 this witness at this time. Thank you.

12 THE COURT: Mr. Sears.

13 MR. SEARS: Thank you.

14 CROSS-EXAMINATION

15 BY MR. SEARS:

16 Q. Welcome to Prescott, Mr. Gilkerson.

17 A. Thank you.

18 Q. You were not provided with any image that
19 constituted a complete, clear and observable out sole pattern
20 to use in a side-by-side in this case; were you?

21 A. I was not provided with an impression that had a
22 full head-to-toe impression. In other words, not every
23 geometric shape that is on that La Sportiva model shoe was
24 observed in the crime scene impression, no.

25 Q. Do you know as you sit here how many different

1 images you were provided by law enforcement?

2 A. I don't recall the exact number. There were 20 to
3 30. That is an estimate.

4 Q. You said there were only a few that you deemed to
5 be suitable for the work that you were undertaking?

6 A. There were some that were suitable and others that
7 were not.

8 Q. It is true, isn't it, that had you been provided
9 an actual suspect shoe to do a side-by-side, the photographic
10 images you were provided would have been insufficient for a
11 number of reasons for such a comparison?

12 A. I would have to have the actual shoe and do the
13 comparison to know for sure. The answer is I don't know,
14 unless I conduct the actual comparison.

15 Q. You told us during our interview at the FBI, and
16 you said again here today, that you have some training and
17 expertise in forensic photography; is that correct?

18 A. Yes.

19 Q. Over the course of your 11 years as a footwear
20 examiner for the FBI, I presume on a daily basis you deal
21 with photographs of questioned impressions?

22 A. Yes, that's correct.

23 Q. And you have developed in your own mind an
24 understanding of what the appropriate techniques to be
25 applied in photographing those images should be; is that

1 right?

2 A. Yes, that's correct.

3 Q. And a number of those appropriate techniques were
4 not utilized in taking the images that you were given by law
5 enforcement in this case; correct?

6 A. Yes. There was some problems with the way that
7 the impressions were photographed.

8 Q. Among the problems you described to us was the
9 fact that the photographs were not taken directly overhead
10 but were at some sort of oblique angle to the impression on
11 the ground; correct?

12 A. Yes. There were some that were taken like that.
13 That's correct.

14 Q. There were also problems with lighting and shading
15 that you observed that could have been resolved by the use of
16 artificial or supplemental lighting by the evidence techs in
17 this case; correct?

18 A. Yes.

19 Q. There also were problems with scale of the
20 impressions on the ground; correct?

21 A. Yes.

22 Q. And one of the problems that you described to us
23 was that in your opinion in order for forensic photography to
24 be done correctly, the scale that appears next to the image
25 needs to be on the same plane as the image; correct?

1 A. It needs to be on the same plane as the bottom of
2 the impression.

3 Q. I meant the impression. The bottom of the
4 impression. If you have an impression that goes down and
5 depresses the earth downward, if you lay the scale on the top
6 of the dirt next to it, it is then not on the same plane as
7 the bottom of the impression; is that right?

8 A. If it is laid on top, it may not be. It depends
9 on how deep the actual impression is in the soil.

10 Q. If you don't have the scale down at the bottom of
11 the impression, you have difficulty from the photographic
12 image measuring the depth of that impression; correct?

13 A. Well, I wouldn't measure the depth of the
14 impression.

15 Q. One of the consequences that you described to us
16 of a lack of proper forensic techniques is the difficulty or
17 impossibility it creates in determining the size of the
18 impression.

19 A. Sorry? Can you see say that again?

20 Q. That is a bad question.

21 When a shoeprint impression is
22 photographed using other than best practices, when the
23 photography is not up to your standards, one of the
24 difficulties you told us it caused you was that it made it
25 difficult and sometimes impossible for you to determine the

1 size of the shoe that made that impression.

2 A. Yes, that's correct.

3 Q. You were not able to determine from the images
4 that you were sent, the size of the shoe that may have made
5 these particular questioned impressions; correct?

6 A. That's correct. It could be because of the way
7 they are photographed, but also some shoe impressions that
8 are recovered from crime scenes are just not very good to
9 begin with. They weren't made under ideal circumstances or
10 conditions.

11 Q. And you described to us the use of materials,
12 among them are dental stone, that can be used by law
13 enforcement to make a cast of a shoeprint impression;
14 correct?

15 A. Yes, that's correct.

16 Q. You told us that you saw nothing about the
17 circumstances of these impressions that you could determine
18 from the photographs that would have prevented law
19 enforcement from at least attempting to make casts of some of
20 these impressions; correct?

21 A. Yes. Castings could have been made.

22 Q. You said, I think, that you had seen casts done of
23 footprints in the sand; correct?

24 A. Sorry? Repeat that.

25 Q. You told us that you had seen cases in which

1 shoeprint impressions had been cast that were made in sand.

2 MR. BUTNER: Objection. I haven't objected
3 for a while on this, but we are going really far afield
4 concerning whether this witness is qualified to offer the
5 opinions that he has offered and the scientific validity and
6 evidentiary relevance and reliability of the principles that
7 underlie his opinions. And I am quoting from the case now
8 when I am speaking about that, *Daubert*.

9 The point being that this is all
10 questioning relative to the investigation conducted by the
11 Yavapai County Sheriff's office and not this witness' opinion
12 or the basis of his opinion and the methods employed to reach
13 that opinion.

14 THE COURT: Mr. Sears.

15 MR. SEARS: Your Honor, the State has
16 presented already general evidence that Mr. Gilkerson is an
17 expert in the general science of shoeprint comparison
18 evidence. It has also been established that for a number of
19 reasons he did not perform that work in this case, but
20 performed a limited and different piece of work. I am simply
21 trying to lay a foundation for the reasons why he was unable
22 to do a side-by-side impression in this case, other than
23 through the data base.

24 I would be happy to move on if the Court
25 wishes.

1 THE COURT: I will overrule the objection.

2 MR. SEARS: I lost track of where I was. Let
3 me start again, Mr. Gilkerson.

4 Q. You considered this case a law enforcement assist;
5 correct, for local law enforcement?

6 A. Yes.

7 Q. This was not an FBI investigation; correct?

8 A. I am not aware that the FBI is investigating this
9 case, but I don't know for sure.

10 Q. You frequently, as you told us, receive requests
11 from local law enforcement agencies throughout the country to
12 perform what you call an assist; correct?

13 A. Yes. A data base search.

14 Q. The purpose of assisting is to aid local law
15 enforcement in understanding some evidence they may have
16 collected. That is one purpose; correct?

17 A. Yes. They generally want to know what type of
18 shoe, or make and model shoe could have left a crime scene
19 impression. That is the essence of those requests.

20 Q. In a case like this where you are not provided a
21 suspect shoe in this case, where your work is limited, as you
22 described it, to comparing photographic images of questioned
23 impressions in the dirt to the data base, one of your
24 purposes then would be to direct law enforcement towards a
25 particular kind of shoe, to guide their investigation in a

1 particular direction; correct?

2 A. Yes, that's correct.

3 Q. Have you ever testified before today in a case in
4 any proceeding, either in trial or pretrial hearing like
5 this, about a data base search that you did where you did not
6 do the kind of work you did in the *Ford* case for the suspect
7 shoe?

8 A. Yes, I have.

9 Q. Have you ever been subjected to a *Daubert* hearing
10 on a data base search?

11 A. No, I have not.

12 Q. Can you tell us of any case, any reported case
13 that you know of, in which the particular skill or technique
14 of a data base comparison has been tested under *Daubert* and
15 *Kumho Tire*?

16 A. Yes. In the *Ford* case I testified in, I am
17 looking at the sole pattern, the out sole design. I am doing
18 that in this case. The difference is there is a shoe in that
19 case that came from a suspect, and in this case it is a shoe
20 of out sole patterns, and there was not a shoe from a
21 suspect, but I employed the same side-by-side comparison
22 technique.

23 Q. In the *Ford* case, you had a suspect shoe; right?

24 A. That's correct.

25 Q. And you made an impression of the shoe at the

1 lab; correct?

2 A. Yes, that's correct.

3 Q. And you took that impression from a shoe, an
4 actual shoe that you held in your hands; correct?

5 A. Yes, that's correct.

6 Q. And you took that impression and compared it to a
7 questioned impression; correct?

8 A. Yes, I did.

9 Q. Now in this case you didn't have a shoe in hand
10 that you had been told was connected to the suspect in this
11 case; correct?

12 A. That's correct. I was not submitted a shoe from a
13 suspect to look at, that's correct.

14 Q. And what you instead did was took some pictures
15 that you described of partial impressions -- when I say
16 partial, I mean less than a complete heel-to-toe image of a
17 shoeprint in the dirt -- and you compared that against the
18 two data bases, the FBI and SICAR; correct?

19 A. Yes, that's correct.

20 Q. When you say side-by-side comparison, I just want
21 to be sure we are talking about what you actually did in this
22 case. That is what you did; correct?

23 A. Yes, that's right.

24 Q. Now, in *Ford*, you were not subjected to a *Daubert*
25 hearing on a data base search because you had the actual

1 suspect shoe in your possession to do an impression in a
2 side-by-side comparison; correct?

3 A. Yes, but --

4 Q. So you didn't --

5 THE COURT: Finish the answer.

6 THE WITNESS: The methodology was the same. I
7 was looking at the out sole pattern on that suspect shoe.
8 That is the same that I did in this case, except that instead
9 of having a suspect shoe, I had a group of shoes from
10 manufacturers. It is the same concept. I am looking at the
11 out sole design, which is what I did in that case and in this
12 case.

13 BY MR. SEARS:

14 Q. I think I understand what it means to look at
15 something and see if it looks like something else, which is
16 what you did in this case. But in the *Ford* case, you didn't
17 have any question about the manufacturer, model or style or
18 out sole pattern of the suspect shoe, because you had it in
19 your hand; right?

20 A. Yes, that's correct.

21 Q. In this case what you were doing instead was
22 looking through a data base that you didn't create; right?

23 A. That's correct.

24 Q. Two data bases that you didn't; correct?

25 A. That's correct.

1 Q. To see if you could find something in that data
2 base that corresponded with these questioned images on the
3 ground. Do you see the difference?

4 A. No, I don't see the difference. I don't see the
5 difference in the sense that I am looking at the out sole
6 pattern. The difference is I have a known shoe in that case,
7 and in this case I don't have a known shoe from a suspect.
8 I'm comparing it to shoes in a data base.

9 Q. Let's see if we can explore this further.
10 You told us when we interviewed you that
11 you did not save the search that you ran in the data bases to
12 any media. It is not recoverable; correct?

13 A. That's correct.

14 Q. So you can't tell me, as we sit here today, which
15 shoe impression was the next closest corresponding one to the
16 questioned impression other than the La Sportiva Ultrarond.
17 What was the next closest one?

18 A. When we get the data base search results, they are
19 not organized based on the best fit. They are based on
20 alphabetical groupings. And in those groupings, I would
21 scroll through the list to see if one made could have made
22 the crime scene impression. It's not assessed at all as to
23 the terms "best fit."

24 Q. You told us that you were making a qualitative
25 assessment. That in your trained eye looking at the

1 photographs that you had of portions of the shoeprint
2 impression and scrolling through this alphabetical list that
3 pops up on your computer screen, you landed on the La
4 Sportiva Ultranord looking back and forth one to the other.
5 That is what you did; correct?

6 A. Yes, that's correct.

7 Q. How many other possible impressions did the data
8 base give you in response to your query?

9 A. I don't recall the exact number, but there was no
10 other shoe that even resembled the La Sportiva Ultranord.

11 Q. I thought you said that the data base was icon
12 driven, and if you in-putted a list of geometric shapes, it
13 would produce a search result that would have a number of
14 possible impressions that simply contained that subset of
15 geometric shapes; correct?

16 A. Yes, that's correct.

17 Q. Does the data base search -- for example, let's
18 say that you have three geometric shapes that you see. Let's
19 call them a triangle, a square and a circle, for us simple
20 minded folks. Would the data base search of SICAR or the FBI
21 data base only give you results that contained all three
22 shapes, or would it give you all the squares, all the
23 triangles, and all the circles?

24 A. It would include shoes that only had a square. It
25 would include shoes that only had a triangle, and it would

1 include shoes that had all three.

2 Q. You can't even do a sort that says don't show me
3 just the triangles. Show me ones that have all three. You
4 can't do that? You can't narrow the search?

5 A. No.

6 Q. Did you have to look in this particular search
7 through thousands of images?

8 A. I looked through hundreds of images.

9 Q. Did you see any other image that contained --
10 first of all, can you tell me now how many discrete and
11 separate geometric shapes you input into this search in this
12 case?

13 A. I entered an arrow, a tri-lobe, and a perimeter
14 lug.

15 Q. Three?

16 A. Three, yes.

17 Q. How many other out sole images did SICAR and then
18 the FBI data base produce in addition to the La Sportiva
19 Ultranord, which I understand only came up in the FBI data
20 base?

21 A. Yes, that's correct.

22 Q. How many others? Hundreds?

23 A. Of the shoes that came up, none of them could have
24 made those impressions.

25 Q. That is not my question. How many other images

1 were you presented with to review using other criteria that
2 simply had those three geometric shapes in them?

3 A. I don't know how many had those three, because the
4 data base would bring up shoes that had all three and shoes
5 that just had one of those three.

6 Q. Does the data base ever miss an image?

7 A. I don't understand what you mean by "miss an
8 image."

9 Q. You say that you are confident that the La
10 Sportiva Ultranord most closely corresponds. You can't tell
11 me anything about any other image that the data base provided
12 for you to look at?

13 A. Yes. I can tell you that they could not have made
14 the impressions from the crime scene.

15 Q. I asked you a specific question. Were there any
16 other images that the data base produced as a search result
17 that contained the three precise geometric shapes that you
18 queried, the size of La Sportiva Ultranord?

19 A. I don't know. I have no way of knowing if there
20 was another shoe that had just those three in it.

21 Q. When you saw the La Sportiva Ultranord, was it
22 early on in the search? Was it one of the first images that
23 you looked at?

24 A. It would be in the middle. It has letter "L," so
25 it would come up in the middle of the search.

1 Q. Did you stop at that point and say "bingo, I found
2 it"?

3 A. No, I continued on.

4 Q. Did you look at every other image?

5 A. In that hit list, yes, I did.

6 Q. Because you didn't have a full heel-to-toe, you
7 saw a number of characteristics from the image that you had
8 in your data base that corresponded in many different ways,
9 not just the shapes, but also in the positioning of the
10 shapes and the spacing that convinced you that in the data
11 base this is the shoe that most closely corresponds; right?

12 A. Yes.

13 Q. You told us that you have no way of knowing what
14 percentage of the total number of out soles in the world,
15 different kinds of out soles those data bases represent;
16 correct?

17 A. No. The number of out soles that exist changes
18 constantly. Manufacturers are coming out with new out sole
19 patterns frequently, three or four times a year in some
20 cases.

21 Q. Do you have some sense as to whether -- let's take
22 the SICAR data base to begin with that you said was 25- to
23 30,000 images?

24 A. Somewhere in that range.

25 Q. Is that ten-percent of the universe of out soles?

1 A. I have no way of knowing that.

2 Q. Is it one percent?

3 A. I don't know if it is one percent. It would be
4 more than ten -- it would be -- I don't know the exact
5 number. I couldn't give that to you.

6 Q. How about the FBI data base, which you said
7 stopped being updated in 2007 or 2008? What percentage of
8 the universe of out soles does that represent?

9 A. I don't know. No one knows the exact number of
10 out sole patterns that exist, and no one even has an estimate
11 of that.

12 Q. Did you receive some information that these
13 particular out soles that were on this La Sportiva shoe were,
14 in fact, manufactured in China?

15 A. I don't know where they were manufactured, but
16 China is a place where they are often made.

17 Q. As you sit here today, you don't have any
18 information about the exclusivity of that particular out sole
19 pattern to these three La Sportiva shoes. You can't tell us
20 that those are the only shoes in the universe that have that
21 out sole pattern.

22 A. I can say based on my experience of looking at
23 thousands of shoe impressions that this is the first time I
24 have ever seen that sole pattern. The geometric shapes that
25 make it up are not common.

1 Q. Did you hear my question?

2 A. I took your question to mean how common was that
3 pattern. That is the way I understood your question.

4 Q. My question was different. My question was can
5 you tell us as you sit here whether or not those out sole
6 tread patterns on the three shoes you saw are unique and
7 exclusive to La Sportiva, or could they be similar to or
8 identical to shoes manufactured by other manufacturers
9 somewhere in the world?

10 A. Yes. That is possible.

11 Q. Do you know what a knock-off is?

12 A. Yes, I do.

13 Q. What is a knock-off?

14 A. A knock-off is a shoe that is made to look like or
15 similar to usually a well-known shoe like a Nike or Reebok.
16 Those are the ones that I have seen in case work.

17 Q. Does that mean it is not possible that these soles
18 were knocked off?

19 A. No. That is not what that means.

20 Q. They could have been, and you just wouldn't know?

21 A. It is possible, yes.

22 Q. Can we talk a little bit about the testing that
23 you talked about. You belong to an organization called
24 SWGTREAD, don't you?

25 A. Yes.

1 Q. That's S-W-G-T-R-E-A-D; correct?

2 A. Yes.

3 Q. What does that stand for? Is that an acronym?

4 A. It stands for SWGTREAD, Scientific Working Group
5 for Shoeprint, Tire Tread Evidence.

6 Q. That is run out of the FBI; correct?

7 A. It was initially created by the FBI lab.

8 Q. And SWGTREAD has been working for a period of time
9 on a response to the report of the National Academy of
10 Sciences with respect to impression comparison, what you call
11 patterned impression comparison evidence; correct?

12 A. Yes.

13 Q. And among the criticisms of the National Academy
14 of Science about CTS is this, this is what the National
15 Academy says: Proficiency testing for examiners of
16 impression evidence is available through Collaborative
17 Testing Service, Inc. The proficiency for footwear
18 impressions include samples that are either a match or not a
19 match; that is, none of the samples included in the tests
20 have the sort of ambiguities that would lead an experienced
21 examiner to an inconclusive -- that is in quotes --
22 conclusion.

23 This is what SWGTREAD says in response.
24 We concur that the CTS proficiency test could be improved.
25 CTS is the only test provider approved by the accrediting

1 body for forensic laboratories. CTS footwear tests do
2 include the possible response of inconclusive, and this has
3 been an appropriate response in past tests.

4 Are you aware of both that criticism and
5 that response by SWGTREAD?

6 A. Yes.

7 Q. Tell me in the 11 CTS tests that you said you have
8 passed with a perfect score, how many of the results in those
9 years were inconclusive on the test?

10 A. That I gave the answer is inconclusive?

11 Q. Yes.

12 A. I don't recall. I don't recall the number.

13 Q. In fact, you would agree with the general
14 assessment that when the CTS come around, it is either going
15 to be a match or it is going to be an exclusion. That is
16 what you are being asked to do. You are not being asked to
17 give some gray area answer like inconclusive; correct?

18 A. No. That is not written or implied in any of
19 that, in any of the test materials that I received.

20 Q. Can you think of one particular test question in
21 the 11 years that you have taken the CTS test where you
22 correctly answered that the result was inconclusive?

23 A. I don't know. It is a test that is made up where
24 they know the answer. No one, to my knowledge, at CTS has
25 experience in looking at shoeprint evidence, so they would

1 score it most likely as a pass or fail.

2 Q. Because it is either a match or not a match?

3 A. Based on their manufacturer's answer.

4 Q. Okay. Now, you gave some specific impressions in
5 this case -- sorry, specific opinions in this case. First,
6 typically when you do a local law enforcement assist, you
7 expect to be called as a witness with respect to your
8 opinions?

9 A. No, not necessarily.

10 Q. You are trying to assist first and foremost;
11 correct?

12 A. Yes, that's correct.

13 Q. Now in this case, I have written down several
14 times what you said. You have said carefully that your
15 opinion is, with respect to the data base search, that
16 looking at those few photographic images that you felt you
17 could use and querying the data base, that in the FBI data
18 base the shoe that most closely corresponds with those few
19 images is this La Sportiva Ultranord. That is your precise
20 opinion; is that right?

21 A. That the La Sportiva shoe could have made those
22 impressions, yes.

23 Q. Let's take it one part at a time.

24 The first part of your opinion, as I
25 understand it, is that the questioned images most closely

1 correspond to the shoe in the data base that is the La
2 Sportiva Ultranord. That is the first part of your opinion;
3 correct?

4 A. Yes.

5 Q. The second part of your opinion is then,
6 therefore, a La Sportiva Ultranord or shoe with a similar out
7 sole could have made the impressions that you were asked to
8 look at; correct?

9 A. Yes, that's correct.

10 Q. So I assume that it would be equally true that
11 they might not have made those impressions; correct?

12 A. No. If I said they could have made the
13 impression, then I wouldn't have a conclusion that says they
14 did not make the impression.

15 Q. Okay. Well, in some places in the field generally
16 that you work in, people would say that the shoe did make
17 those impressions. There was an inclusion. That shoe, to
18 the exclusion of all other shoes, made the impression that is
19 in question; correct? You understand that is something that
20 people who do footwear impression work for a living will say.

21 A. In those conclusions, those are cases involving a
22 shoe from a suspect to compare to the crime scene
23 impressions.

24 Q. Well, in my mind the word "could" implies some
25 less degree of certainty than the word "did." Would you

1 agree?

2 A. Yes, that's correct.

3 Q. Would it also be fair to describe your impression
4 as saying you can't rule out the La Sportiva Ultranord as a
5 shoe that could have made the questioned impressions in this
6 case?

7 A. That's correct.

8 Q. Can you rule in the La Sportiva Ultranord to the
9 exclusion of all the other shoes in the universe?

10 A. No. I haven't examined all the other shoes in the
11 universe.

12 Q. So you used the word when we spoke with you in
13 Virginia "inclusion" to describe a match, that a particular
14 shoe in a particular questioned impression were one and the
15 same, that the shoe made that impression. You called that an
16 inclusion; correct?

17 A. Or could have made the impression, that is also an
18 inclusion.

19 Q. What are the other descriptive terms then on the
20 scale of opinions that you use in making such comparisons
21 starting at the low end? Do you have an exclusion vocabulary
22 that you use?

23 A. Yes. We can exclude shoes as having made a
24 particular crime scene impression.

25 Q. Is the opposite extreme the word "include"? Is

1 that how you personally describe a match?

2 A. The opposite would be an identification. That is
3 the term that I would use.

4 Q. Identification. Did you make an identification in
5 this case?

6 A. No.

7 Q. Where in the spectrum then that is framed by an
8 exclusion and an identification does the opinion "could have
9 made" land?

10 A. It would be more on the inclusion side.

11 Q. Where?

12 A. On the scale of elimination to identification.

13 Q. That is your opinion in the case having never seen
14 a suspect shoe, just on the data base; correct?

15 A. Yes. That that shoe with that design could have
16 made those crime scene impressions. That is my opinion, yes.

17 Q. But your opinion would necessarily be limited to
18 the fact that the known sole, out sole impressions, are
19 limited to those in the data base; correct?

20 A. Yes. I could only refer to the images that are in
21 the data bases that we have.

22 Q. You said there was no known or potential rate of
23 error for this kind of side-by-side data base comparison. Is
24 that really what you are saying?

25 A. For the methodology, yes.

1 Q. How do you know that?

2 A. There is no built in error. It is not a
3 quantitative analysis. When you talk about error rate, you
4 are usually talking about a quantitative analysis where you
5 are generating a number or using equipment, let's say a
6 machine that measures something has an inherent level for
7 error rate built into that. I don't have that in this
8 situation.

9 Q. If what I am understanding you say is that if you
10 feel that you are correct, that is the end of the error rate
11 discussion. If you think you are right, then it must be so.
12 Is that what you are telling us?

13 A. No. There could be an error involved in the way
14 the individual was applying the methodology.

15 Q. Who would be the judge of whether the methodology
16 was being applied right, other than the examiner?

17 A. It would be an examiner who peer reviews the case.

18 Q. How about a jury?

19 A. A jury could make that determination, as well.

20 Q. Do you track all of your cases to know whether
21 anyone has ever successfully criticized an opinion you have
22 given regarding footwear impression comparisons?

23 A. I am not aware of that.

24 Q. Have you ever been wrong?

25 A. Not to my knowledge. I have never been proven

1 incorrect.

2 Q. Ever?

3 A. To my knowledge, I have never been proven
4 incorrect.

5 MR. SEARS: I don't have any other questions,
6 Your Honor. Thank you.

7 THE COURT: Mr. Butner.

8 REDIRECT EXAMINATION

9 BY MR. BUTNER:

10 Q. Mr. Gilkerson, in this particular case, were your
11 results peer reviewed?

12 A. Yes, they were.

13 Q. How was that accomplished?

14 A. I provided the crime scene images in the data base
15 printout of the sole pattern to a co-worker who also conducts
16 shoeprint analysis. He did the same comparison and agreed
17 with my findings.

18 Q. Is that commonly done by you in all of your cases?

19 A. Yes. All of our cases and entire shoeprint
20 analysis are peer reviewed.

21 Q. So that is done on every single case that you
22 analyze?

23 A. Yes. It is done on every single case that I have
24 analyzed.

25 Q. And in regard to these images that were provided

1 to you, you indicated that there wasn't one complete image
2 that had a full footprint on it, so to speak, that you could
3 use. Is that basically correct?

4 A. Yes, that's correct.

5 Q. So how did you manage to analyze the images and
6 come up with the type of patterns that you found present?

7 A. I observed geometric shapes in those impressions
8 or partial impressions, and entered those in the search
9 parameters.

10 Q. Were you able to use those partial print
11 impressions in order to come up with a complete picture of
12 what you believe was the suspect shoe?

13 A. Yes. It was the La Sportiva Ultrarond and the
14 Pike's Peak and the imaging, as well.

15 Q. You say this was a law enforcement assist; right?

16 A. Yes.

17 Q. Is this a common problem that you face when you
18 are performing your job?

19 A. It is a common request that we receive, yes.

20 Q. What I am talking about is do you frequently get
21 photographs that don't have complete shoe footprints on them
22 and you have to use a number of different photographs in
23 order to ascertain all of the shapes present to do your
24 analysis?

25 A. Yes. There are many cases where there are only

1 partial shoe impressions recovered.

2 Q. Are they the majority, or can you give us a
3 percentage?

4 A. They are the majority, yes.

5 Q. So you frequently have to do this?

6 A. Yes.

7 MR. BUTNER: I don't have any further
8 questions of this witness, Judge. Thank you.

9 THE COURT: Mr. Gilkerson, I have a couple of
10 questions.

11 When you are doing the comparison between
12 the data base and what you were sent by the Sheriff's office,
13 was it one, two, three, five? What particular number of the
14 Sheriff's office photographs that you were using when you
15 came to the conclusion? Are we dealing with a limited number
16 of the photographs within the group of photographs that were
17 sent by the Sheriff's office?

18 THE WITNESS: Yes. There were some
19 photographs that I could analyze, and there were other
20 photographs where there was insufficient detail for me to
21 conduct a data base search. In other words, I couldn't tell
22 what the geometric shapes were that were in the photos.

23 THE COURT: So, if you are authorized to
24 testify in the case, you are going to be referring to how
25 many photographs that you thought were usable or valuable for

1 making the comparison in coming to your ultimate conclusion?

2 THE WITNESS: Yes.

3 THE COURT: Do you know what that number is?

4 THE WITNESS: It is in my notes. I would have
5 to look at my notes.

6 THE COURT: Go ahead.

7 THE WITNESS: (Whereupon, the witness reviews
8 a document.)

9 Approximately 20.

10 THE COURT: About 20 of the photographs were
11 of some utility to you in making the comparison?

12 THE WITNESS: Yes.

13 THE COURT: And of the 20, was there a
14 measuring device in a percentage of those or in all of those?

15 THE WITNESS: I will need to refer to the
16 images.

17 THE COURT: Go ahead.

18 THE WITNESS: Most of the impressions that I
19 was sent had a scale in the photograph, yes, but there were
20 some -- there were a few that did not.

21 THE COURT: And you were talking to Mr. Sears,
22 I think, about sometimes there are problems with the scale
23 not being on the same plane. Was that true of all or most of
24 the photographs that you reviewed that were of some utility
25 to you, where the measuring device was not on the same plane

1 as the level of the impression?

2 THE WITNESS: In those particular images, that
3 would not affect the data base search that I did. They may
4 affect the actual comparison with a known shoe.

5 THE COURT: I guess where I am going with that
6 is you didn't determine the particular size of the shoe that
7 made the impressions. Is that accurate?

8 THE WITNESS: Yes, that's correct.

9 THE COURT: And the reason for that, did that
10 have to do with the scale, or did it have to do with the
11 quality of the photography or both?

12 THE WITNESS: Both.

13 THE COURT: So do you reach any conclusions
14 about the size of the shoe that made the impressions that you
15 are rendering the opinion about?

16 THE WITNESS: Generally we refer to physical
17 size, that is the size and proportional spacing of the
18 geometric shapes that make up the sole pattern. That is not
19 necessarily a shoe size.

20 THE COURT: Thank you.

21 Follow-up questions to mine, Mr. Butner?

22 MR. BUTNER: None from the State. Thank you.

23 THE COURT: Mr. Sears?

24 MR. SEARS: No, Your Honor.

25 THE COURT: Any need to keep Mr. Gilkerson

1 here?

2 MR. BUTNER: No. I don't believe so.

3 THE COURT: May he be excused?

4 MR. SEARS: Sure. Travel safely.

5 THE COURT: You are excused. Thank you for
6 all your trouble for getting up here.

7 THE WITNESS: Thank you, Your Honor.

8 (Whereupon, these proceedings were concluded.)

9 ***o0o***

10

11

12

13

14

15

16

17

18

19

20

21

22

23

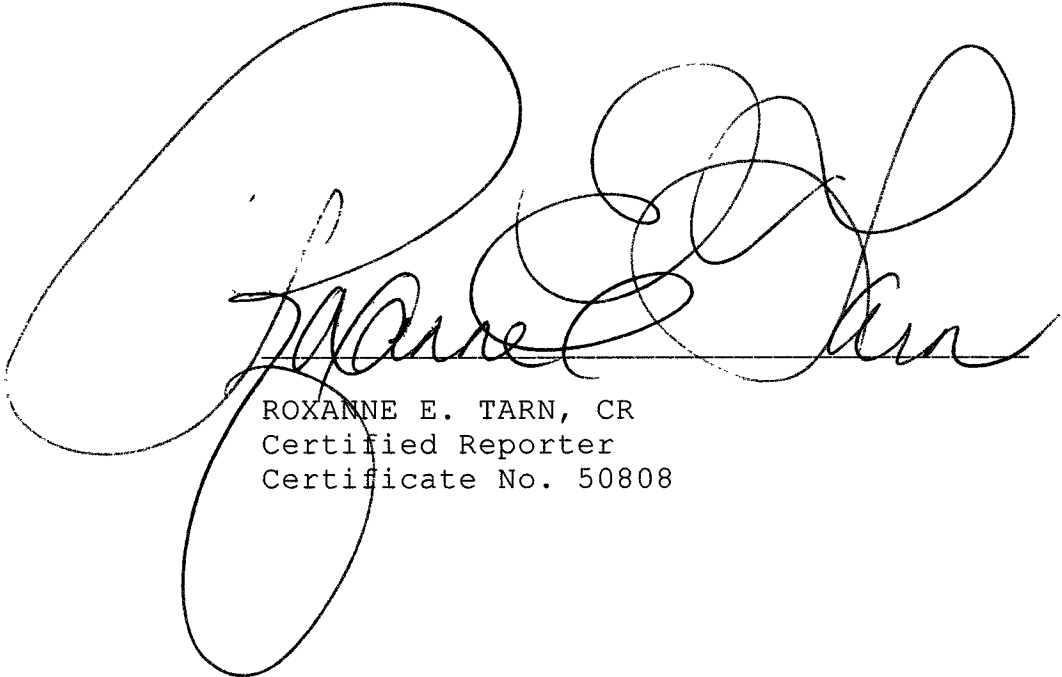
24

25

C E R T I F I C A T E

I, ROXANNE E. TARN, CR, a Certified Reporter
in the State of Arizona, do hereby certify that the foregoing
pages 1 - 63 constitute a full, true, and accurate transcript
of the proceedings had in the foregoing matter, all done to
the best of my skill and ability.

SIGNED and dated this 1st day of August, 2010.



ROXANNE E. TARN, CR
Certified Reporter
Certificate No. 50808